

IN THE CLAIMS:

Prior to examination on the merits, please amend the claims of the international application as follows.

Claims 1-64 (Canceled).

Please add claims 65-125 as follows:

65. A method of curing a radiation-curable fluid, the method including:
- emitting radiation from a radiation source towards the fluid to be cured, wherein at least 90% of the radiation has a wavelength in a band having a width of less than 50nm; and
- providing an inerting environment in the region of the radiation source.
66. A method according to claim 65, further including the step of applying the fluid to a substrate, the radiation being emitted towards fluid on the substrate, wherein an inerting environment is not provided in a region where the fluid is being applied to the substrate.
67. A method according to claim 65, further including providing a shroud in the region of the radiation source.

68. A method according to claim 65, the method further including the step of providing a nitrogen inerting environment.

69. A method according to claim 65, including the step of feeding a low oxygen gas to a region adjacent the source.

70. A method according to claim 65, further including providing a gas curtain in front of the source.

71. A method according to claim 69 including providing a directable outlet for the low oxygen gas.

72. A method according to claim 65, including the step of supplying gas at a positive pressure in the region of the source.

73. A method according to claim 65, wherein the source is mounted in a cavity, the method including the step of positively pressurising the cavity.

74. A method according to claim 65, including cooling the source of radiation.

75. A method according to claim 65, wherein the radiation source includes an LED.
76. A method according to claim 75, wherein the LED emits UV radiation.
77. A method according to claim 76, the method including emitting radiation from an array of LEDs towards the ink.
78. A method according to claim 65, wherein the radiation is emitted from an elongate source.
79. A method according to claim 78, wherein the source comprises an array of LEDs and is moved relative to the ink to be cured in a cure direction, wherein the LEDs do not form a column substantially aligned with the cure direction.
80. A method according to claim 75, wherein the source comprises a plurality of rows of LEDs, wherein a row of LEDs is offset from an adjacent row of LEDs.
81. A method according to claim 80, wherein the source comprises N rows of LEDs, the LEDs of each row having a pitch of w along the row direction, and wherein each row of LEDs is offset by Yw/N from an adjacent row, wherein Y , w and N are integers.

82. A method according to claim 65, wherein the fluid comprises ink.
83. A method according to claim 65, wherein the fluid is adapted such that it is reactive when exposed to radiation of a predetermined wavelength.
84. A method according to claim 83, wherein the fluid is adapted such that it is only substantially reactive when exposed to radiation from the radiation source.
85. A method according to claim 65, wherein the fluid includes a component which is adapted to respond to radiation emitted by the radiation source.
86. A method according to claim 83, wherein the fluid includes a photoinitiator adapted to respond to radiation emitted by the source.
87. A method according to claim 83, wherein the fluid includes a photosensitiser adapted to respond to radiation emitted by the source.
88. A method according to claim 83, wherein the fluid includes a photosensitiser adapted to extend the spectral response of the radiation curable fluid.

89. A method according to claim 65, wherein the fluid comprises ink jet ink.
90. A method according to claim 89, further including applying the ink to a substrate using an ink jet printing technique.
91. A method according to claim 65 further including the step of varying the power of the radiation source.
92. A method of curing a radiation-curable fluid, the method including emitting radiation from a radiation source towards the fluid to be cured, wherein at least 90% of the radiation has a wavelength in a band having a width of less than 50nm.
93. Ink including at least one radiation-polymerisable monomer, oligomer or prepolymer and a photoinitiator system containing a photoinitiator wherein the photoinitiator system is adapted to absorb radiation having a wavelength between from 280 to 450nm and to absorb sufficient radiation within a 50nm band width to effect cure of the ink.
94. Ink according to claim 93, wherein the ink is substantially free of water and volatile organic solvents.
95. Ink according to claim 93 further including at least one colouring agent.

96. Ink according to claim 93, wherein the photoinitiator system further includes a photosensitiser.

97. An ink according to claim 93, wherein the ink is an ink jet ink.

98. An ink according to claim 93, wherein the photoinitiator system is adapted to absorb sufficient radiation within a 30nm, preferably within a 20nm band width to cure the ink.

99. An ink according to claim 93, wherein the photoinitiator system comprises a radical photoinitiator selected from 1-hydroxycyclohexyl phenyl ketone, 2-benzyl-2-dimethylamino-(4-morpholinophenyl)butan-1-one, benzildimethylketal, bis(2,6-dimethylbenzoyl-2,4,4-trimethylpenylphosphine oxide and mixtures thereof;

or a cationic photoinitiator selected from a diaryliodonium salt, a triarylsulphonium salt and mixtures thereof;

or one or more photoinitiators together with a photosensitiser selected from ketocoumarins, thioxanthone and mixtures thereof.

100. Apparatus for curing a radiation-curable fluid, the apparatus including

a radiation source for emitting radiation towards the fluid to be cured, wherein at least 90% of the radiation has a wavelength in a band having a width of less than 50nm; and

a device for providing an inerting environment in the region of the radiation source.

101. Apparatus according to claim 100, wherein the radiation source comprises an LED.
102. Apparatus according to claim 100, wherein the source is adapted to emit UV radiation.
103. Apparatus according to claim 100, wherein the apparatus includes an array of sources.
104. Apparatus according to claim 100, including an elongate source of radiation.
105. Apparatus according to claim 104, wherein the source comprises an array of LEDs and is arranged to move relative to the ink to be cured in a cure direction, wherein the LEDs do not form a column substantially aligned with the cure direction.
106. Apparatus according to claim 100, including a plurality of rows of LEDs, wherein a row of LEDs is offset from an adjacent row of LEDs.
107. Apparatus according to claim 106 wherein the source comprises N rows of LEDs, the LEDs of each row having a pitch of w along the row direction, and wherein each row of LEDs is offset by Yw/N from an adjacent row, wherein Y, w and N are integers.
108. Apparatus according to claim 100, including a reduced oxygen gas source.

109. Apparatus according to claim 100, including a nitrogen source.
110. Apparatus according to claim 100, further including a printhead, wherein the arrangement is such that the inerting environment is not provided in the region of the printhead.
111. Apparatus according to claim 100, further including a shroud in the region of the radiation source.
112. Apparatus according to claim 100, including a device for providing a gas curtain in front of the source.
113. Apparatus according to claim 100 including an outlet for the gas, wherein the outlet is directable.
114. Apparatus according to claim 100, including a gas outlet adjacent the source for supplying gas at a positive pressure in the region of the source.
115. Apparatus according to claim 100, including a cavity, the source being mounted in the cavity, the apparatus including a device for positively pressurising the cavity.

116. Apparatus according to claim 100 including a device for cooling the source of radiation.

117. Apparatus according to claim 110 including one or more of the following:

a fan;

a heatsink; and

a cooling fin.

118. Apparatus according to claim 100, wherein the fluid is ink.

119. Apparatus for curing radiation-curable fluid, the apparatus including a radiation source for emitting radiation towards fluid to be cured, wherein at least 95% of the radiation emitted from the source has a wavelength in a band having a width of less than 50nm.

120. Apparatus according to claim 100, wherein the fluid is adapted such that it is reactive when exposed to radiation of a predetermined wavelength.

121. Apparatus according to claim 100, further including an ink jet printhead for emitting ink onto a substrate.

- 122. A printer including apparatus according to claim 100.
- 123. A printer according to claim 122 wherein the radiation source is moveably mounted in the printer.
- 124. A printer according to claim 122, wherein the printer comprises an ink jet printer.
- 125. An array of light emitting diodes adapted for use in curing ink in an ink jet printer.